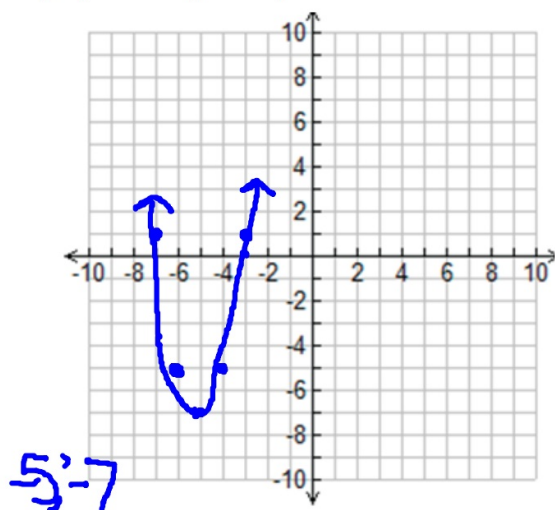


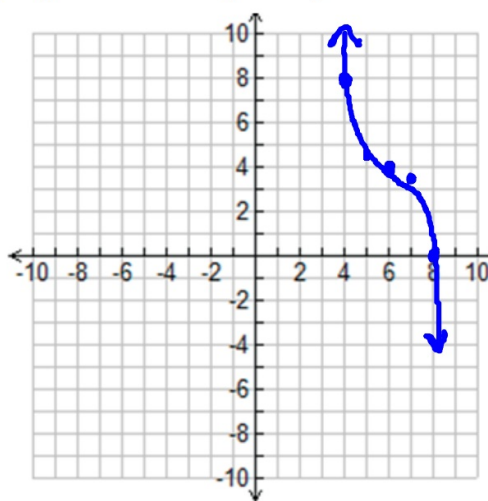
Bellwork 3/12/13:

Graph each of the following functions:

1)  $y = 2(x+5)^2 - 7$



2)  $y = -1/2(x-6)^3 + 4$



Page 1

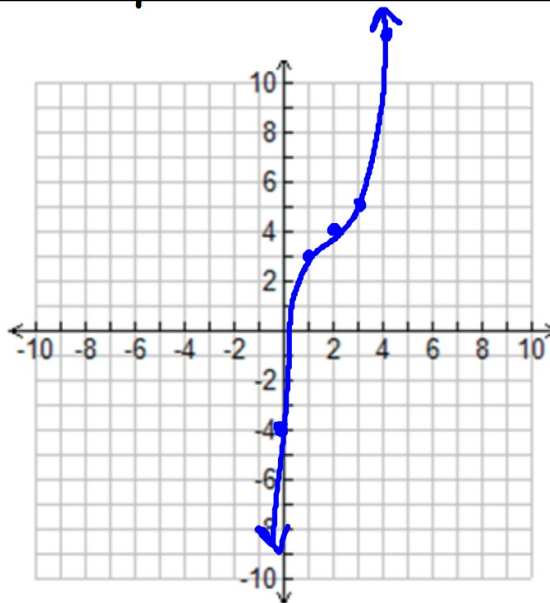
## Section 5.9 - Finding the equation of Cubic Graphs

Remember:

$$y = a(x-h)^3 + k$$

Page 2

Find the equation of each cubic function:



$$y = a(x-h)^3 + k$$

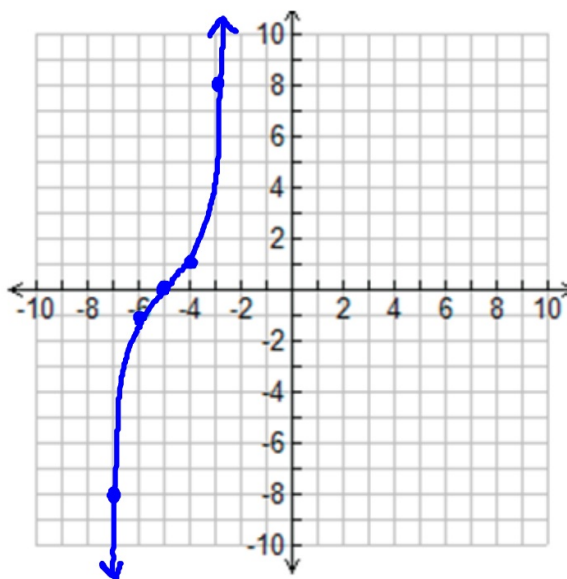
$$y = 1(x-2)^3 + 4$$

$$\boxed{y = (x-2)^3 + 4}$$

$$a = 1 \quad h, k (2, 4)$$

Page 3

example 2:



$$a = 1 \quad h, k (-5, 0)$$

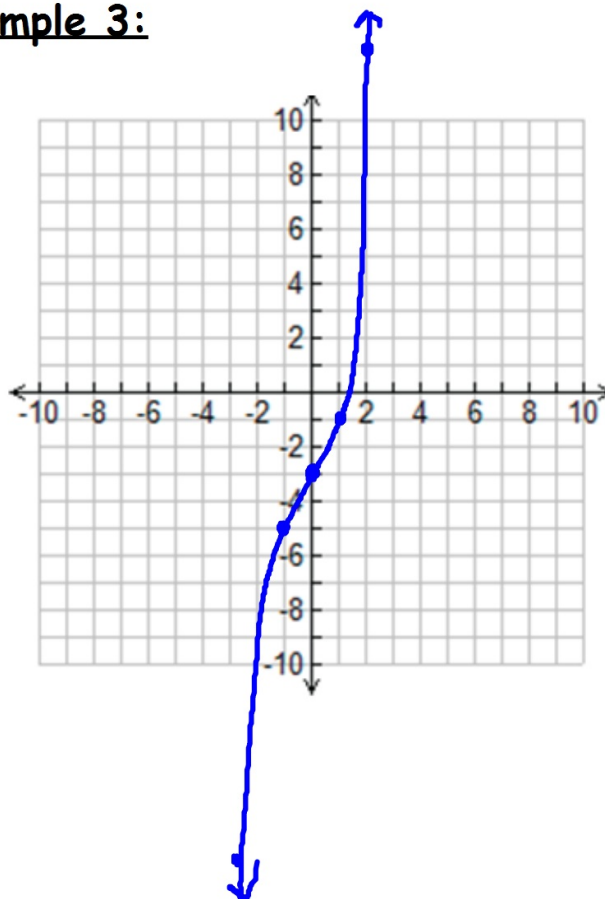
$$\boxed{y = (x+5)^3}$$

or

$$y = 1(x+5)^3 + 0$$

Page 4

example 3:

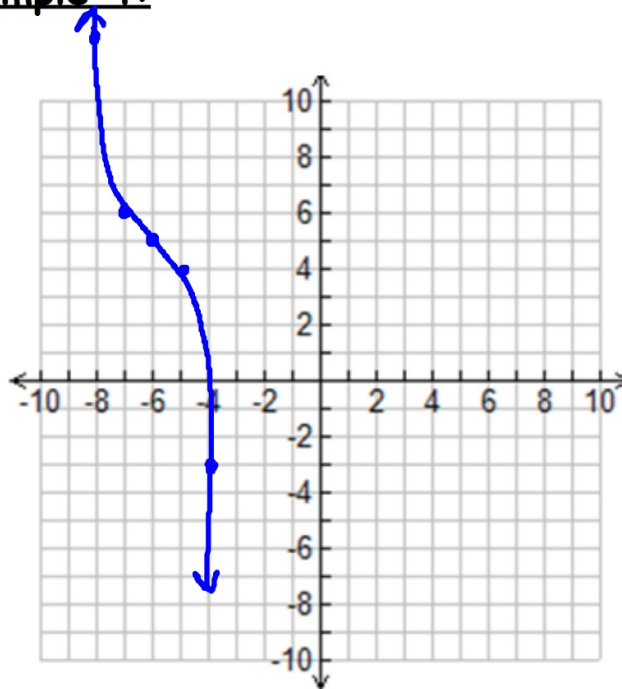


$$a = 2 \quad (0, -3)$$

$$y = 2(x-0)^3 - 3$$

$$y = 2x^3 - 3$$

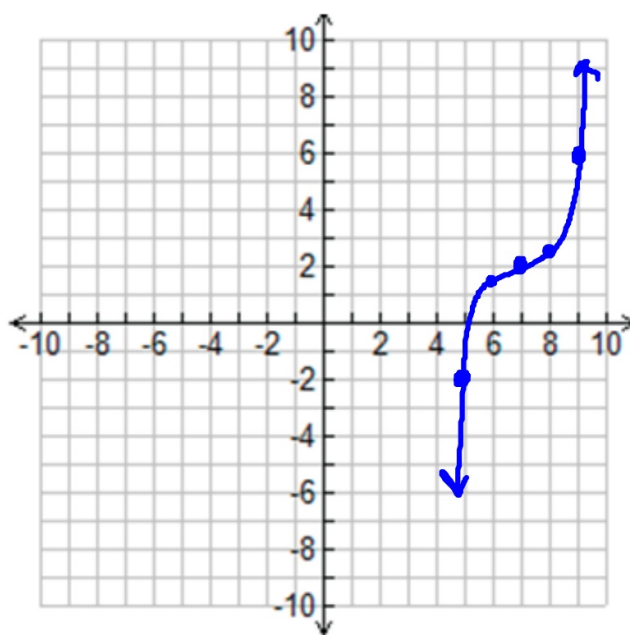
example 4:



$$a = -1 \quad (-6, 5)$$

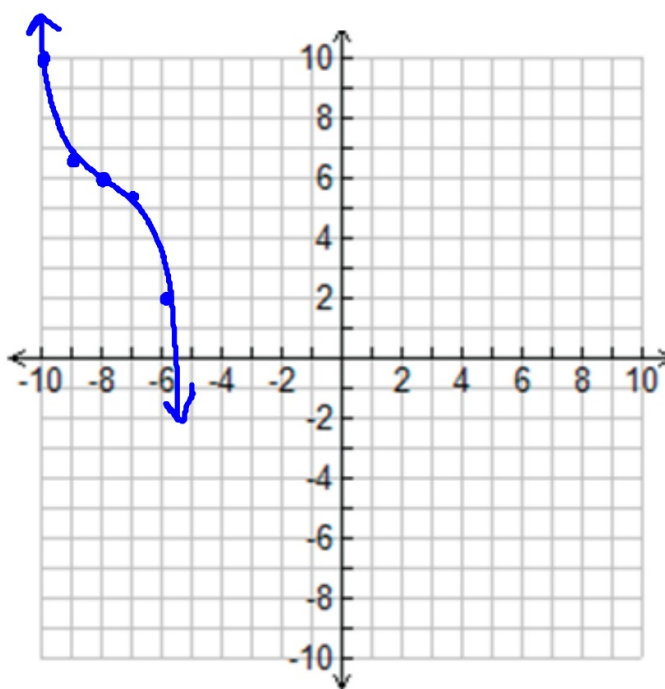
$$y = -(x+6)^3 + 5$$

**example 5:**



$$a = \frac{1}{2} \quad (7, 2)$$
$$y = \frac{1}{2}(x-7)^3 + 2$$

**example 6:**



$$a = -\frac{1}{2} \quad (-8, 6)$$
$$y = -\frac{1}{2}(x+8)^3 + 6$$

## **Homework: Worksheet 5.9 #2**

